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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---------------------------------|-------------|----------------------|---------------------|------------------|
| 10/719,072 | 11/21/2003 | Mali Gong | 62888.00001 | 2272 |
| 30256 | 7590 | 02/13/2006 | EXAMINER | |
| SQUIRE, SANDERS & DEMPSEY L.L.P | | | UNELUS, ERNEST | |
| 600 HANSEN WAY | | | | |
| PALO ALTO, CA 94304-1043 | | | ART UNIT | PAPER NUMBER |
| | | | 2828 | |

DATE MAILED: 02/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

| | | | |
|------------------------------|---------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/719,072 | GONG ET AL. | |
| | Examiner Ernest Unelus | Art Unit 2828 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 21 November 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-18 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-18 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 21 November 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>11/21/2003</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1- 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Zhang (US pub. 20020105997).

With respect to claims 1 and 15, Zhang discloses a multipas geometry and constructions for diode-pumped solid-state laser comprising; directing a pump light into a laser slab through slab comers of said laser slab (see fig. 4C and paragraph 0023); propagating the pump light within the laser slab by total internal reflection (TIR) (see paragraph 0006); and substantially absorbing the pump light during propagating (see paragraph 0016).

With respect to claims 2, 10, and 16, Zhang discloses wherein corner faces of said laser slab are coated for high transmission for the wavelength of the pump light

(see paragraph 0129), and lateral faces of said slab are coated for high reflection for the wavelength of the pump light (see paragraph 0016).

With respect to claims 3 and 17, Zhang discloses wherein a laser light propagates inside the laser slab between two TIR faces in a zigzag optical path (see paragraph 0006 and fig. 10B).

With respect to claims 4 and 18, Zhang discloses wherein the step of absorbing achieves a high absorption efficiency through total internal reflection (TIR) of pump light inside said laser slab (see Zhang's claim 5H).

With respect to claim 5, Zhang discloses wherein the step of absorbing achieves multiple absorptions through total internal reflection (TIR) of pump light inside said laser slab (see paragraphs 0016 and 0022).

With respect to claim 6, Zhang discloses a laser slab formed by a solid state laser material (0118), said laser slab including an input receiving an input beam (see fig. 10B), an output outputting an output beam and slab corners with corner faces (see fig. 10C); and a pump source providing a pump light (see fig. 10A); wherein said pump light is directed into said laser slab through said slab corners of said laser slab (see fig. 10A), propagated within said laser slab by total internal reflection (TIR) (see paragraph 0006),

and substantially absorbed during propagation (see paragraph 0016); and wherein said laser slab outputs an amplified laser beam (see paragraph 0075).

With respect to claim 7, Zhang discloses wherein the number of said corner faces is four (see fig. 10A and paragraph 0023).

With respect to claim 8, Zhang discloses wherein said laser slab includes a circumambient portion and a central portion (see fig. 15N), said circumambient portion including an un-doped host area (see fig. 15N), said center portion including one or more doped host areas (see paragraph 0202).

With respect to claim 9, Zhang discloses wherein a cross section of said central portion is square or circular (see fig. 2A)

With respect to claim 11, Zhang discloses wherein the input beam and the output beam are located at one same side of said laser slab, said input beam and said output beam forming an angle with each other (see fig. 15T).

With respect to claim 12, Zhang discloses wherein two mirrors are placed at another side of the said laser slab symmetrically with respect of said input beam and said output beam (see fig. 12A)

With respect to claims 13 and 14, Zhang discloses wherein said pump source includes a diode array, a coupling system, and being a fiber bundle (see paragraph 0094), said coupling system including two cylindrical lenses (23) and a lens duct (17), said two cylindrical lenses being placed between the diode array and the lens duct, generatrices of said two cylindrical lenses are orthogonal to each other and are parallel to fast axis and slow axis of said diode array, respectively (see paragraph 0211).

Response to Arguments

Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Byren et al. (US Pat. 5,974,061) discloses a corner-pumped laser having a gain module without specifically disclosing the two reflective mirrors in the slab

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernest Unelus whose telephone number is 571-272-8596. The examiner can normally be reached on 9am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun Harvey can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Minsun Harvey
Supervisor
Art Unit 2828

E.U.
